ABSTRACT

A color image capturing device using a mosaic color filter, which can enhance sensitivity of a brightness signal while suppressing cost increase. Line transfer from the accumulation section 11v is conducted twice successively so that a combined line which is combination of two lines is created in the horizontal transfer section 11h. In a combined line, addition <R+G> of R component and G component and addition <G+B> of G component and B component are alternately arranged. A divided reset clock $\phi r'$ for the output section 11d is set to have a cycle twice as long as the cycle of a horizontal transfer clock ϕh, and the phase of $\phi r'$ is set being displaced by an amount corresponding to one cycle of ϕh between an odd-numbered combined line and an even-numbered combined line. Consequently, data D (R+G) corresponding to <R+G> and data D (R+2G+B) corresponding to addition <R+G> and <G+B> are alternately obtained relative to an odd-numbered line, while data D (G+B) corresponding to <G+B> and data D (R+2G+B) corresponding to addition <R+G> and <G+B> are alternately obtained relative to an even-numbered line. Using data D(R+2G+B), which is data obtained by combining four pixels, as a brightness signal, sensitivity of the image capturing device can be enhanced. Color signals are obtained from data D(R+G) and D(G+B).